UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,898	11/25/2003	David H. Mead	OC-5692	1188

24959 7590 10/14/2010

PPG INDUSTRIES INC
INTELLECTUAL PROPERTY DEPT
ONE PPG PLACE
PITTSBURGH, PA 15272

EXAMINER	
KRUER, KEVIN R	

ART UNIT	PAPER NUMBER
1787	

MAIL DATE	DELIVERY MODE
10/14/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID H. MEAD and DAVID MONTGOMEY ROGERS

Appeal 2009-005137
Application 10/723,898
Technology Center 1700

Before EDWARD C. KIMLIN, CHUNG K. PAK, and
BRADLEY R. GARRIS, *Administrative Patent Judges.*

KIMLIN, *Administrative Patent Judge.*

DECISION ON APPEAL[1]

This is an appeal from the final rejection of claims 7, 10, 11, 13, 14, 16-20, 25 and 26. Claim 7 is illustrative:

---

[1] The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the "MAIL DATE" (paper delivery mode) or the "NOTIFICATION DATE" (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

7. A film prepared by applying to a substrate a plastisol composition comprising a poly(vinyl chloride) polymer, at least one plasticizer, and an infrared-reflective pigment in a sufficient amount so that there is essentially no transmittance of light of near infrared wavelength through the film, and coalescing the applied composition to produce the film, wherein the film is from about 2 mils to about 5 mils thick.

The Examiner cites the following references in the rejection of the appealed claims:

Krafft	4,056,397	Nov. 1, 1977
Ravinovitch	4,424,292	Jan. 3, 1984
Stamper	4,574,103	Mar. 4, 1986
Lacatus	4,728,677	Mar. 1, 1988
Sullivan	6,416,868 B1	Jul. 9, 2002
Takai	2002/0147246 A1	Oct. 10, 2002
Tajima	2002/0177658 A1	Nov. 28, 2002
Crabb	2003/0008959 A1	Jan. 9, 2003

Appellants' claimed invention is directed to a film comprising a plastisol composition on a substrate. The plastisol composition comprises poly(vinyl chloride) polymer, at least one plasticizer, and an infrared-reflective pigment. The pigment is present in an amount such that there is essentially no transmittance of light of near infrared wavelength through the film. The film has a thickness of from about 2 mils to about 5 mils.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

(a) claims 7, 10, 11, 13, 16, 17, 19, and 20 over Ravinovitch in view of Krafft,

(b) claims 14 and 18 over Ravinovitch in view of Krafft and Sullivan, and

(c) claims 7, 10, 11, 13, 16, 17, 25 and 26 over Stamper in view of Krafft.

Appellants do not present separate arguments for any particular claim in the three groups of claims separately rejected by the Examiner. Accordingly, the groups of separately rejected claims stand or fall together.

We have thoroughly reviewed each of Appellants' arguments for patentability. However, we are in complete agreement with the Examiner that the claimed subject matter would have been obvious to one of ordinary skill in the art within the meaning of § 103 in view of the applied prior art. Accordingly, we will sustain the Examiner's rejections for essentially those reasons expressed in the Answer, and we add the following primarily for emphasis.

We consider first the § 103 rejection of Ravinovitch in view of Krafft. There is no dispute that Ravinovitch, like Appellants, discloses a film prepared by applying to a substrate a plastisol composition comprising a poly(vinyl chloride) polymer, at least one plasticizer, and an infrared-reflective pigment. As recognized by the Examiner and urged by Appellants, Ravinovitch does not expressly teach the claimed film thickness of from about 2 mils to about 5 mils, and that the pigment is present in a sufficient amount so that there is essentially no transmittance of light of near infrared wavelength through the film. However, Ravinovitch teaches that the pigment may be in capstock which is an outer weatherable layer in coextended vinyl house siding and vinyl windows, and Appellants do not contest the Examiner's finding that capstock thicknesses were generally known to be about 8 mils, which is in the order of the claimed range.

Also, Krafft teaches that the thickness of a film comprising a reflective pigment is a result effective variable, and Appellants do not dispute the Examiner's finding that the pigment concentration is also a result effective variable with respect to the reflectance. Accordingly, based on the state of the prior art, we agree with the Examiner that it would have been a matter of obviousness for one of ordinary skill in the art to resort to routine experimentation to determine the optimum thickness and concentration of a film comprising a reflective pigment in order to maximize it's reflectivity. It has generally been held that a change in concentration or thickness of a prior art composition is a matter of obviousness for the skilled artisan in the absence of objective evidence of unexpected results1578. *See In re Woodruff*, 919 F.2d 1575, 1578 (Fed. Cir. 1990); *In re Aller*, 220 F.2d 454, 456 (CCPA 1955). In the present case, Appellants have proffered no such evidence of unexpected results associated with the claimed thickness.

Appellants stress that Ravinovitch does not teach or suggest a capstock thickness other than the 450 mils of Example 1. We agree with the Examiner, however, that the reference is not limited to the test runs of the example, and one of ordinary skill in the art would have reasonably interpreted the reference as applicable to typical capstocks of the prior art having thicknesses on the order of the claimed range.

Regarding the use of a sufficient amount of pigment so that there is essentially no transmittance of near infrared wavelength through the film, we concur with the Examiner that Ravinovitch's object of lowering the heating of house siding would have motivated one of ordinary skill in the art to use the optimum amount of pigment to prevent transmission of all infrared radiation.

Turning to the § 103 rejection over Stamper in view of Krafft, there is no dispute that Stamper teaches a film prepared from a plastisol composition comprising a plastisol grade vinyl chloride polymer and titanium dioxide, a known reflector of infrared radiation. Also, the Examiner correctly points out that Stamper teaches that the layers should be coated to their desired thickness. While Appellants point to Stamper's disclosure that each layer has a thickness of from about 12 mils to 50 mils, we, for the reasons set forth above, agree with the Examiner that it would have been obvious for one of ordinary skill in the art to resort to routine experimentation to determine the optimum thickness of the layer and concentration of the pigment therein. Stamper's objective of using titanium dioxide to improve the weatherability and resistance to sunlight of the layer would have motivated one of ordinary skill in the art to use the amount of pigment that reflects all radiation. Appellants do not claim any pigment that is more effective than those used in the prior art for reflecting sunlight and infrared radiation. Concerning Appellants' argument that one of ordinary skill in the art would not separate the layers of Stamper, the Examiner properly points out that such separation is not necessary to meet the claimed requirement for a film on a substrate. As stated by the Examiner, "[t]he claimed film may be present as a layer in a laminate" (Ans. 11, 1st full para.).

Appellants do not set forth a separate substantive argument for the § 103 rejection over Ravinovitch in view of Krafft and Sullivan but rely upon the asserted deficiencies of the combination of Ravinovitch and Krafft.

In conclusion, based on the foregoing, the Examiner's decision rejecting the appealed claims is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(v).

AFFIRMED

kmm

PPG INDUSTRIES INC
INTELLECTUAL PROPERTY DEPT
ONE PPG PLACE
PITTSBURGH, PA 15272